

REMARKS

The application has been reviewed in light of the Office Action dated September 16, 2004. Claims 1-9 were pending, with claims 3-9 having been withdrawn by the Patent Office from consideration. By this Amendment, claims 3-9 have been canceled, new claims 10-15 have been added, and claim 1 has been amended to clarify the claimed invention. Accordingly, claims 1, 2 and 10-15 are now pending, with claims 1 and 10 being in independent form.

The title was objected to as purportedly being not descriptive.

By this Amendment, the title has been amended.

Withdrawal of the objection to the title is respectfully requested.

Claims 1 and 2 were rejected under 35 U.S.C. § 102(b) as purportedly anticipated by U.S. Patent No. 5,245,215 to Sawaya.

Applicant has carefully considered the Examiner's comments and the cited art, and respectfully submits that independent claim 1 is patentable over the cited art, for at least the following reasons.

This application relates to a semiconductor device responsive to different levels of input and output signals. As discussed in the application at pages 1-3, some chips are manufactured using an older process which require a higher driving voltage than chips manufactured using newer processes. The chips manufactured using a newer process is preferred since it has lower power consumption and higher density. However, some electronic devices still use chips manufactured with the older process, because the device is governed by requirements imposed by global standard for that type of device. While chips manufactured using the newer process which are designed to operate with a lower driving voltage can operate with the higher driving voltage, operation at the higher driving voltage results in inefficient performance.

Applicant devised a semiconductor device which integrates a plurality of semiconductor chips into a single package. A first semiconductor chip in the semiconductor device outputs one or more first signals having a first (lower) level. A second semiconductor chip in the semiconductor device includes a signal level conversion circuit which converts the first signals from the first semiconductor chip into second signals having a second level different from (higher than) the first level. Thus, the first semiconductor chip can operate at lower voltage level, and the semiconductor device is nevertheless able to output signals at the second (higher) level which are acceptable to a device which operates at the second level.

Each of independent claims 1 and 10 includes these features.

Sawaya, as understood by Applicant, is directed to a multichip packaged semiconductor device which purportedly can be mounted at a high density. The multichip packaged semiconductor device of Sawaya purportedly includes a desirable characteristics.

However, Sawaya is not directed at the problem that some chips operate at one level while other chips operate at a second level which is different from the first level.

Applicant does not find teaching or suggestion in Sawaya of converting first signals having a first level into second signals having a second level different from the first level, as provided by the claimed invention of the present application.

Should the Examiner disagree therewith, Applicant requests that the Examiner cite to the specific column and line numbers in the cited reference where basis for the disagreement can be found.

Since the cited art does not disclose or suggest each and every feature of the claimed invention, the cited art does not render the claimed invention unpatentable.

Accordingly, for at least the above-stated reasons, Applicant respectfully submits that

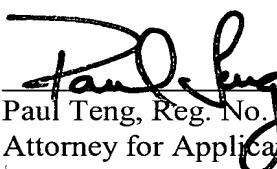
independent claim 1, and the claims depending therefrom, are patentable over the cited art.

If a petition for an extension of time is required to make this response timely, this paper should be considered to be such a petition. The Office is hereby authorized to charge any fees that may be required in connection with this amendment and to credit any overpayment to our Deposit Account No. 03-3125.

If a telephone interview could advance the prosecution of this application, the Examiner is respectfully requested to call the undersigned attorney.

Allowance of this application is respectfully requested.

Respectfully submitted,

  
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